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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/743,713	05/07/2001	Douglas Philip Turvey	616-034	7323

7590 03/24/2004  
Lowe Hauptman Gilman & Berner  
1700 Diagonal Road Suite 310  
Alexandria, VA 22314

EXAMINER

DINH, NGOC V

ART UNIT	PAPER NUMBER
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2187

DATE MAILED: 03/24/2004

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Please find below and/or attached an Office communication concerning this application or proceeding.

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# Office Action Summary

Application No.

09/743,713

Applicant(s)

TURVEY, DOUGLAS PHILIP

Examiner

NGOC V DINH

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 03 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 12 February 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

1. This Office Action is responsive to Amendment filed 02/03/2003 in which claims 1 and 8 are amended.

Applicant's previous arguments are moot with regard to claims 1-19 in view of the new rejection.

### *Claim Objections*

2. Claim 8 is objected to because of the following informalities:

The phrase "a method of operating a wherein] is ambiguous.

Appropriate correction is required.

### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-11 are rejected under 35 U.S.C.102 (b) as being anticipated by Wyland PN 5,440,715. The reference 5,440,715 was listed in Notice of Reference Cited PTO-892 in the Examiner first office action.

#### **3.As per claim 1:**

Wyland teaches a content addressable memory (CAM) comprising a CAM control logic unit and a plurality of cells connected in a chain, the cells being serially connected, each of the cell including: a memory block [34, fig. 2] coupled to a common address bus [16 bit I/O bus, fig. 2]; a comparator [36, fig. 2; col. 4, lines 30-35] coupled to a common data bus and to the data interface of the memory block; a switch [D15-d0; col. 4, lines 20-25; bi-directional bus, col. 8, lines 57-60] for coupling the data interface of the memory block with the data bus, and a logic block including a Match flip-flop [e.g., two flip-flop, col. 11, lines 7-10], the memory being operable:

In a Search phase [e.g., match operation; comparison; when matching cycle is initiated, col. 4, lines 58-68] to serially match [e.g., serially combining, col. 6, lines 25-30] a sequence of words on the common data bus with the contents of a sequence of addresses in the memory blocks of the cells, the logic block being arranged for cumulatively storing the results of the matching as the matching proceeds; and in an Access phase [e.g., read/write operation, col. 9, lines 20-35], to render the cells matched in the Search phase serially available for access via the common address and data buses, said access phase occurring subsequently to said search phase [col. 2, lines 15-35; col. 3, lines 35-60; col. 4, lines 18-65; col. 6, lines 15-60].

**4.As per claims 2-7:**

Wyland further teaches a CAM wherein:

Each cell includes a memory block, a logic block, a comparator, and a bi-directional switch [fig. 2-4; col. 4, lines 18-25; col. 6, lines 37-50; col. 8, lines 57-60];

An intergraded circuit chip carries the CAM and plural cells [fig. 1, 5];

several such chips can be chained [fig. 2; abstract]; each chip includes a control unit which can be disable [col. 4, lines 60-67];

a MASK bus [MASK bus-48 bits, fig. 2] input for determining which bits of the words of the sequence of words are used for matching in the Search phase;

a return line from the end of the chain of cells back to the CAM control unit which changes state [e.g., resetting the CAM; all CAM word can be preset to the empty state] when all Match flip-flops in the chain have been accessed [col. 9, lines 50-60; col. 11, lines 30-45].

**5.As per claims 8-11:**

Wyland further teaches a method of operating a CAM comprising the steps of choosing a standard byte address [e.g., skip/empty bit] in all data blocks and including a byte different from the inactive state of the data bus [e.g., data bus is not driven by the device when the W terminal is LOW, col. 3, lines 60-65] in that address in every data block [col. 9, lines 50-60; col. 11, lines 30-40];

a method of operating a CAM wherein: each cell is divided into a plurality of distinct data blocks [fig. 2]; a plurality of cells are combined into an extended data block with

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all cells of the block including corresponding key fields [e.g., data word], [col. 7, lines 8-11];

choosing a standard byte address [e.g., skip/empty bit] in all data blocks and filling the data block with one data value if the data block in that cell is valid and another data value of the data block in the cell is cleared [col. 9, lines 38-60].

### *Conclusion*

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

a) Shaw PN 5,428,565 discloses a CAM.

b) Lipovski et al PN 5,777,608 discloses Content searchable memories.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ngoc Dinh whose telephone number is (703) 305-3023. The examiner can normally be reached on Monday-Friday 8:30 AM-5:00 PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Donald A. Sparks, can be reached on (703) 308-1756. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 746-7239 for regular communications and (703) 746-7238 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

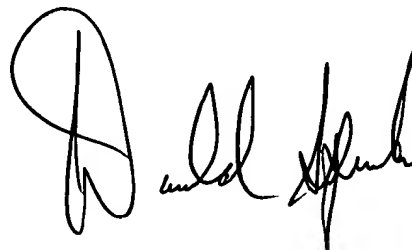


NGOC DINH

Patent Examiner

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March 15, 2004



DONALD SPARKS

Supervisory Patent Examiner

Technology Center 2100